We claim:

1. A servobrake (10) for a motor vehicle, of the type comprising a pneumatic brake booster (12) a control rod (14) of which is able, in response to an input force, to indirectly control a pneumatic piston (16) and/or directly control a feeler (18) coaxial with the pneumatic piston (16), which pneumatic piston (16) and feeler (18) are intended to act upon a main piston (20) of a hydraulic brake master cylinder (22), of the type in which the main piston (20) is mounted to slide inside a roughly axial bore (32) of a body (30) of the master cylinder (22) between a rear position of rest and a forward position of applying a braking force, of the type in which the main piston (20) is elastically returned toward its rear position of rest, of the type in which at least one sealing means (38) is interposed between the main piston (20) and the bore (32) to delimit, within the bore (32), a rear supply chamber (36) supplying hydraulic fluid and a front pressure chamber (24), of the type in which the main piston (20) comprises at least one main valve shutter (44) which can move between an open position, corresponding to the rear position of rest of the main piston (20), whereby the main valve shutter (44) places the rear supply chamber (36) and the front pressure chamber (24) in communication, and a pressurizing position, corresponding to the forward position of application of the main piston (20), whereby the main valve shutter (44) interrupts the communication between the rear supply chamber (36) and the front pressure chamber (24) to allow a hydraulic braking pressure to build up in the front pressure chamber (24), of the type in which the main piston (20) comprises:

a first rear end (46), secured to the main piston (20), which is intended to be actuated by the pneumatic piston (16) of the booster (12),

a second rear end (48) which is intended to be actuated by the feeler (18) coaxial with the piston

(16) and which is secured to a piston (50) known as a reaction piston of a ram (52) which is housed in the main piston (20), which ram (52) comprises a chamber (54) known as a reaction chamber able to be placed in communication with the front pressure chamber (24) of the master cylinder to transmit, to the second rear end (48), the resultant reaction of the pressure forces in the front pressure chamber (24),

isolation means, which are interposed between the reaction chamber (54) of the ram (52) and the front pressure chamber (24), and which are able, in response to the advance of the second rear end (48) with respect to the first rear end (46) when the input force exerted on the control rod (14) of the booster (12) exceeds a given rate threshold, to isolate the reaction chamber (54) of the ram (52) from the front pressure chamber (24) such that the resultant reaction of the pressure forces in the front pressure chamber (24) is not transmitted to the second rear end (48),characterized in that the isolation means comprise:

a hydraulic isolation valve shutter (58) which is interposed between the reaction chamber (54) of the ram (52) and the front pressure chamber (24) and which is independent of the reaction piston (50) of the ram (52); and

flow restricting means, interposed between the hydraulic isolation valve shutter (58) and the front pressure chamber (24),in order, when the pressure in the reaction chamber (54) of the ram (52) exceeds a given pressure threshold associated with the exceeding of the given rate threshold, to close the hydraulic isolation valve shutter (58) so as to interrupt the communication between the reaction chamber (54) of the ram and the front pressure chamber (24).

2. The servobrake (10) according to claim 1, characterized in that the isolation valve shutter (58) is arranged inside the cylindrical and axial reaction chamber (54) of the ram (52).

3. The servobrake (10) according to claim 2, characterized in that the flow restricting means comprise a front communication duct (60) of a diameter smaller than that of the reaction chamber (54), which communicates with the front pressure chamber (24), and in that the isolation valve shutter (58) comprises at least:

an isolation piston (74), of a diameter roughly equal to that of the reaction chamber (54) of the ram (52), which is guided in sliding in the reaction chamber (54) of the ram (52) by axial guide means and which is returned elastically rearward,

an isolation seat (76), which is formed at the transverse front end (78) of the reaction chamber (54) and into which the front axial communication duct (60) opens, in order to allow the isolation piston (74) to be kept away from the isolation seat (76) when the pressure in the chamber (54) of the ram (52) is below the given pressure threshold and in order, when the pressure in the chamber (54) of the ram (52) exceeds the given pressure threshold associated with the exceeding of the given rate threshold, and because of the flow restriction created by the front communication duct (60), to create a depression in the front communication duct (60) to press the isolation piston (74) firmly into contact with the isolation seat (76) so as to shut off the front communication duct (60).

4. The servobrake (10) according to claim 3, characterized in that the front communication duct (60) has an axial cylindrical first part (62) which opens into the reaction chamber (54) of the ram (52) and a roughly radial second part (64) which opens into the axial first part (62) and which communicates with the front pressure chamber (24).

5. The servobrake (10) according to claim 4, characterized in that the means for axial guidance of the isolation piston (74) comprise a rod (80), secured to the isolation piston, a first section (82) of which passes with clearance through the axial cylindrical

first part (62) of the communication duct and a second section (84) of which is mounted to slide in an axial guide bore (86) of the main piston (74) which is arranged coaxially in front of the axial cylindrical first part (62) of the communication duct (60).

6. The servobrake (10) according to claim 5, characterized in that the second part (64) of the front communication duct opens into a peripheral intermediate chamber (66) of the main piston (20) which communicates with the front pressure chamber (24).

7. The servobrake (10) according to claim 6, characterized in that it comprises means for immobilizing the valve shutter (58) in its position in which it shuts off the communication duct (60).

8. The servobrake (10) according to claim 7, characterized in that the immobilizing means comprise means (96) that can be expanded radially into contact with the guide rod (80) of the isolation piston (74), which means are activated when the pressure in the peripheral intermediate chamber (66) corresponds to the hydraulic braking pressure in the front pressure chamber (24).

9. The Servobrake (10) according to claim 8, characterized in that the expandable means (96) comprise at least one elastic immobilization cup (98) which is mounted in a radial drilling (100) arranged between the peripheral intermediate chamber and the axial guide bore (86) for guiding the isolation piston (74) and which is able, when the pressure in the peripheral intermediate chamber (66) corresponds to the hydraulic braking pressure in the front pressure chamber (24), to deform radially inward to come into contact with the guide rod (80) of the isolation piston (74).

10. The servobrake (10) according to claim 8, characterized in that the expandable means comprise at least one radial immobilizing piston (102) mounted to slide in a radial drilling (100) arranged between the peripheral intermediate chamber (66) and the axial

guide bore (86) for guiding the isolation piston (74), against the action of return means, and which is able, when the pressure in the peripheral intermediate chamber (66) corresponds to the hydraulic braking pressure in the front pressure chamber (24), to come into contact with the guide rod (80) of the isolation piston (74).

11. The servobrake (10) according claim 10, characterized in that the elastic return means for returning the isolation piston (74) comprise a compression spring (88) mounted in a return chamber (90) coaxial with the peripheral intermediate chamber, one end of which spring bears against the body of the main piston (20) and the other end of which spring bears against one end (92) of the guide rod (80) of the isolation piston (74) projecting from the associated guide bore (86).

12. The servobrake (10) according to claim 11, characterized in that the ram (52), the isolation valve shutter (58) of the ram, the communication duct (60), the means for immobilizing the valve shutter (58) and the return chamber (90) are arranged in a tubular element (104) which is housed in a rear bore (106) of the tubular main piston (20), in that the tubular element (104) and the rear bore (106) delimit the peripheral intermediate chamber (66), and in that the rear bore (106) is closed by the first rear end (46) which forms a stopper, a drilling (108) of which has the second rear end (48) passing coaxially through it.

13. The servobrake (10) according to claim 12, characterized in that the main valve shutter (44) is a valve shutter of coaxial type interposed between the front pressure chamber (24) and the rear supply chamber (36).